

Amendments to the Specification

Please replace the paragraph that begins at page 3, line 21, with the following amended paragraph:

The optical sensor which can be seen in Fig. 2 includes a measuring chamber which is formed by the carrier 6 and the labyrinth 7, with a light receiver 11 and two light sources 12, 12', each of which is arranged in a corresponding housing 13, 14, 15. These housings consist of a floor part, in which the appropriate diode (photodiode or IRED) is held, and which has, on its front side which faces the ~~center~~center of the measuring chamber, a window opening 13W, 14W, 15W for light entry and exit. As can be seen in ~~the figure~~Fig. 2, the scattering space which is formed in the measuring chamber, in the area in front of the above-mentioned window-like openings 13W, 14W, 15W of the housings 13, 14, 15, is compact and open. This arrangement and conformation makes the detector most suitable for use of a transparent body which can be inserted into this scattering space for smoke simulation. Such transparent bodies are used for calibration or for testing the smoke sensitivity when the detector is manufactured (see EP-B-0 658 264).

Please replace the paragraph that begins at page 3, line 34, with the following amended paragraph:

At least in the case of the housings 14 and 15, the frames 14F, 15F of the window openings 14W, 15W are in one-part form, thus reducing the tolerances for smoke sensitivity. In known scattered light smoke detectors, the window frames consist of two parts, one of which is attached to the roof of the measuring chamber, the other to the floor. When the floor is put on, fitting difficulties constantly occur, and the result is variable window sizes and the formation of a light gap between the two window

halves and thus undesired interference with the emitted and received light. With the one-part window housings, ~~housing windows~~, interference of this kind is excluded, and no problems with the positioning precision of the window halves can occur. The windows are rectangular or square, and between the window openings 13W, 14W, 15W and the associated light source 12, 12' and/or the lens of the associated light receiver 11, there is a relatively large gap, resulting in a relatively small opening angle of the relevant light beams. A small opening angle of the light beams has the advantage that on the one hand light from the light sources 12, 12' hardly meets the floor, and on the other hand the light receiver 11 does not "see" the floor, so that smoke particles deposited on the floor cannot generate any interfering scattered light. A further advantage of the large gap between the windows 13W, 14W, 15W and the light source 12, 12' or the lens of the light receiver 11 is that the optical surfaces which are penetrated by light are relatively deep inside the housing, and therefore well protected from pollution, resulting in constant sensitivity of the optoelectronic elements.

Please replace the paragraph that begins at page 5, line 19, with the following amended paragraph:

For better discrimination between different aerosols, active or passive ~~polarisation~~ polarization filters can be provided in the beam path on the transmitter and/or receiver side. The carrier 6 is appropriately prepared, and has grooves (not shown) which are provided in the housings 13, 14 and 15, and in which ~~polarisation~~ polarization filters can be fixed. As a further option, as-light sources 12, 12' diodes which emit radiation in the wavelength range of visible light can be used (see EP-A-0 926 646), or the light sources can emit radiation of different wavelengths, e.g. red light from one light source and blue light from the other.